## REMARKS

Claims 1, 23, 24, 42, 43, 50, 76 and 98 are amended. Claims 62-75 are canceled. Claims 99-106 are added. Claims 1-61 and 76-106 are in the application for consideration.

Applicant's independent claims 1, 24, 43, 76 and 98 as originally filed clearly were directed to methods of depositing a silicon-comprising material where the silicon present therein is in an elemental form. Such independent claims have been amended to insert this previous inherent subject matter by reciting depositing of an elemental form silicon-comprising material.

Each of Applicant's remaining independent claims stand rejected over a combination of references which includes U.S. Application Publication 2004/0000321 to Cui et al. The Examiner relies upon such as disclosing that a substrate is placed within a chamber for "silicon deposition". The undersigned finds no reference in Cui et al. of a process for depositing elemental form silicon-comprising material. Cui et al. is only specifically seen to disclose formation of a "silicon oxide" layer, of course wherein silicon is inherently in compound and not elemental form. The Au et al. publication does not cure this defect in Cui et al. Accordingly, the Examiner's combination of references does not include all the limitations of Applicant's independent claims 1, 24, 43, 76 and 98. Accordingly, the Examiner's rejection in this regard is in error, and should be withdrawn. Such claims as presently worded should be allowed, and action to that end is requested.

Applicant's independent claims 76 and 98 stand rejected over a combination of Cui et al. and Au et al. Claim 76, in addition to that referred to above, recites feeding of a cleaning gas to within the deposition chamber effective to remove at least some of any native oxide formed on the semiconductor substrate, and after such feeding depositing an elemental form silicon-comprising material on the semiconductor substrate within the deposition chamber. Accordingly, claim 76 inherently requires the substrate to be within the deposition chamber while said cleaning gas is being fed. The Examiner rejects claim 76 apparently relying upon Cui et al., and indicates on the sentence bridging page two and three of the Office Action that the "substrate can be cleaned of oxides prior to deposition, note cols. 1 and 4".

The undersigned finds no reference to cleaning of oxides from the semiconductor substrate to be deposited upon prior to deposition in either the 1st or 4th columns of the Cui et al. reference, or elsewhere. None of the references is seen to disclose in the context of depositing an elemental form silicon-comprising material the feeding of a cleaning gas in the manner which Applicant recites in independent claim 76. As neither Cui et al. nor any of the other references of record discloses such, the cited references do not encompass all of the claim 76 limitations. Accordingly, the Examiner's rejection of claim 76 should additionally be withdrawn for this reason, and action to that end is requested.

Claim 98 should be allowed for analogous reasons to those presented for the allowability of claim 76. Specifically, none of the references is seen to disclose in the context of depositing an elemental form silicon-comprising material the feeding of a cleaning gas in the manner which Applicant recites in independent claim 98. As neither Cui et al. nor any of the other references of record discloses such, the cited references do not encompass all of the claim 98 limitations. Accordingly, claim 98 should be allowed for this additional reason.

Independent claim 43 recites first and second infrared radiation transparent walls, and flowing heat from at least one lamp through a first of such walls while detecting substrate temperature by measuring emissivity through a second of such walls. The references relied upon by the Examiner are not seen to disclose two such walls, and certainly not flowing heat through one while measuring substrate temperature in a non-contacting manner through the other. Accordingly, the references cited by the Examiner do not encompass all of these further limitations of independent claim 43, and such should be allowed for this additional reason.

Applicant's dependent claims should be allowed as depending from allowable base claims, and for their own recited features which are neither shown nor suggested in the cited art. For example and by way of example only, claims 23 and 42 requires generation of plasma during the depositing, yet where such plasma is <u>not</u> generated with the plasma generating electrode received external of the chamber proximate the infrared radiation

transparent wall. None of the references, whether taken alone or in combination, is in any way seen to disclose or suggest a method of depositing an elemental form silicon-comprising material wherein plasma is generated within the chamber during depositing with one electrode and not with another electrode which is capable of generating plasma. Accordingly, claims 23 and 42 should be allowed for this additional reason.

Claims 99-106 are added. Claim 99 recites that the first infrared radiation transparent wall is received below the positioned substrate, and the second infrared radiation transparent wall is received above the positioned substrate, and wherein heat flows to the substrate through the first infrared radiation transparent wall from at least one lamp received external of the chamber. Claim 99 also recites the depositing of an elemental form silicon-comprising material on a semiconductor substrate using heat flowing from such lamp through the first infrared radiation transparent wall. Claim 99 also recites that during the depositing, substrate temperature is detected at least in part by measuring emissivity from above the substrate through the second infrared radiation transparent wall using a non-contacting emissivity sensor. Claim 99 also recites the forming of a deposit on the second infrared radiation transparent wall within the chamber above the substrate during the depositing. Claim 99 also recites after the depositing the generation of a plasma within the chamber with the cleaning gas from at least one plasma generating electrode received external of the chamber proximate the second infrared radiation transparent wall effective

to remove at least some of the deposit from the second infrared radiation transparent wall within the chamber.

Neither Cui et al, Au et al., nor Rhieu discloses pairs of such specifically recited positioned infrared radiation transparent walls, the passing of heat through the first, the measuring of temperature through the second, the forming of a deposit on the second, and subsequent removal of at least some of the deposit from the second using a plasma generated by an external electrode received proximate the second wall. Accordingly, Applicant's added independent claim 99 should be allowed.

Applicant's claims depending from claim 99 should be allowed as depending from an allowable base claim, and for their own recited features which are neither shown nor recited in the cited art.

Added independent claim 105 is a combination of claim 99 and claims 101-103.

This application is believed to be in immediate condition for allowance, and action to that end is requested.

Respectfully submitted,

Dated: 9-18-06

By: _____
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